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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/713,849	11/15/2000	Daniel Biederman	CISCP671	4811

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EXAMINER	
MAIS, MARK A	

ART UNIT	PAPER NUMBER
2664	

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/713,849	BIEDERMAN, DANIEL	
	Examiner	Art Unit	
	Mark A. Mais	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 November 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 23, 2006 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Miriyala (USP 6,977,898).

4. With regard to claim 1, Miriyala discloses, in a communication network, a method for forwarding data across the network comprising:

assigning a priority level to said data assigned according to the priority of the call being made, *wherein said priority level is based on a delay tolerance of said data and data supporting real time communication has a high priority level* **[if a high priority call comes in and there is sufficient bandwidth available, a customary (non-compressed) connection is made, col. 4, lines 10-15; otherwise, the bandwidth renegotiation scheme causes existing voice calls to adopt new compression schemes to accommodate the new high priority call, col. 5, lines 18-26]**;

determining a compression level for said data based on priority level **[priority levels are made between data and voice, col. 1, lines 14-15, and, furthermore, priorities are made between calls (i.e., regular calls and high priority calls), col. 2, lines 40-45 (i.e., more than two priority levels are available, col. 4, lines 44-46); high compression schemes use less bandwidth than low compression schemes, col. 5, lines 15-18, and, therefore, the bandwidth renegotiation scheme causes existing voice calls to adopt new compression schemes to support the new high priority call, col. 5, lines 18-26]**; and

sending said data through said network **[the renegotiation scheme allows the new call to be accommodated within the network (col. 4, lines 19-22) prior to transmission, wherein compression usually accomplished by a DSP, col. 1, line 65 to col. 2, line 2]**.

5. With regard to claim 10, Miriyala discloses, in a digital communication network, a method for forwarding packets across the network comprising:

providing a data compression system having a variable compression level **[priority levels are made between data and voice, col. 1, lines 14-15, and, furthermore, priorities are made between calls (i.e., regular calls and high priority calls), col. 2, lines 40-45 (i.e., more than two priority levels are available, col. 4, lines 44-46); high compression schemes use less bandwidth than low compression schemes, col. 5, lines 15-18, and, therefore, the bandwidth renegotiation scheme causes existing voice calls to adopt new compression schemes to support the new high priority call, col. 5, lines 18-26]**;

inputting the packets to the data compression system while adjusting the variable compression level for individual ones of the packets responsive to priority level of the packets, w*herein said priority level is based on a delay tolerance of said packets and data supporting real time communication has a high priority level* **[if a high priority call comes in and there is sufficient bandwidth available, a customary (non-compressed) connection is made, col. 4, lines 10-15; otherwise, the bandwidth renegotiation scheme causes existing voice calls to adopt new compression schemes to accommodate the new high priority call, col. 5, lines 18-26]**; and

sending the packets as compressed through the network **[the renegotiation scheme allows the new call to be accommodated within the network (col. 4, lines 19-22) prior to transmission, wherein compression usually accomplished by a DSP, col. 1, line 65 to col. 2, line 2]**.

6. With regard to claim 11, Miriyala discloses, in a digital communication network, apparatus for forwarding data across the network comprising:

a compression switch that receives the data and assigns a compression level to the data responsive to a priority level of the data, *wherein said priority level is based on a delay tolerance of said data and data supporting real time communication has a high priority level* **[priority levels are made between data and voice, col. 1, lines 14-15, and, furthermore, priorities are made between calls (i.e., regular calls and high priority calls), col. 2, lines 40-45 (i.e., more than two priority levels are available, col. 4, lines 44-46); high compression schemes use less bandwidth than low compression schemes, col. 5, lines 15-18, and, therefore, the bandwidth renegotiation scheme causes existing voice calls to adopt new compression schemes to support the new high priority call, col. 5, lines 18-26]**;

a compression system that compresses the data according to the compression level **[if a high priority call comes in and there is sufficient bandwidth available, a customary (non-compressed) connection is made, col. 4, lines 10-15; otherwise, the bandwidth renegotiation scheme causes existing voice calls to adopt new compression schemes to accommodate the new high priority call, col. 5, lines 18-26]**; and

an output interface that forwards the data across the network as compressed by the compression system **[the renegotiation scheme allows the new call to be accommodated within the network (col. 4, lines 19-22) prior to transmission, wherein compression is usually accomplished by a DSP, col. 1, line 65 to col. 2, line 2]**.

7. With regard to claim 16, Miriyala discloses a computer program product **[inherent because network nodes 102/104 (e.g., controller 116, col. 4, lines 10-14) are running the communication link management application (fig. 1, col. 3, lines 4-10) and stored in memory]** for forwarding data across a network comprising:

code **[inherent]** that assigns a priority level to the data, *wherein said priority level is based on a delay tolerance of said data and data supporting real time communication has a high priority level* **[priority levels are made between data and voice, col. 1, lines 14-15, and, furthermore, priorities are made between calls (i.e., regular calls and high priority calls), col. 2, lines 40-45 (i.e., more than two priority levels are available, col. 4, lines 44-46); high compression schemes use less bandwidth than low compression schemes, col. 5, lines 15-18, and, therefore, the bandwidth renegotiation scheme causes existing voice calls to adopt new compression schemes to support the new high priority call, col. 5, lines 18-26]**;

code that compresses data according to the priority level **[if a high priority call comes in and there is sufficient bandwidth available, a customary (non-compressed) connection is made, col. 4, lines 10-15; otherwise, the bandwidth renegotiation scheme causes existing voice calls to adopt new compression schemes to accommodate the new high priority call, col. 5, lines 18-26]**;

code that sends the data through the network **[the renegotiation scheme allows the new call to be accommodated within the network (col. 4, lines 19-22) prior to transmission, wherein compression usually accomplished by a DSP, col. 1, line 65 to col. 2, line 2]**; and

a computer-readable storage medium that stores the codes **[inherent because network nodes 102/104 (e.g., controller 116, col. 4, lines 10-14) are running the communication link management application (fig. 1, col. 3, lines 4-10) and stored in memory]**.

8. With regard to claim 25, Miriyala discloses a computer program product **[inherent because network nodes 102/104 (e.g., controller 116, col. 4, lines 10-14) are running the communication link management application (fig. 1, col. 3, lines 4-10) and stored in memory]** for forwarding packets across a network comprising:

code **[inherent]** that provides a data compression system having a variable compression level **[priority levels are made between data and voice, col. 1, lines 14-15, and, furthermore, priorities are made between calls (i.e., regular calls and high priority calls), col. 2, lines 40-45 (i.e., more than two priority levels are available, col. 4, lines 44-46); high compression schemes use less bandwidth than low compression schemes, col. 5, lines 15-18, and, therefore, the bandwidth renegotiation scheme causes existing voice calls to adopt new compression schemes to support the new high priority call, col. 5, lines 18-26]**;

code **[inherent]** that inputs the packets to the data compression system while adjusting the variable compression level for individual ones of the packets responsive to priority level of the packets, *wherein said priority level is based on a delay tolerance of said packets and data supporting real time communication has a high priority level* **[if a high priority call comes in**

and there is sufficient bandwidth available, a customary (non-compressed) connection is made, col. 4, lines 10-15; otherwise, the bandwidth renegotiation scheme causes existing voice calls to adopt new compression schemes to accommodate the new high priority call, col. 5, lines 18-26];

code **[inherent]** that sends the packets as compressed through the network **[the renegotiation scheme allows the new call to be accommodated within the network (col. 4, lines 19-22) prior to transmission, wherein compression usually accomplished by a DSP, col. 1, line 65 to col. 2, line 2**]; and

a computer-readable storage medium that stores the codes **[inherent because network nodes 102/104 (e.g., controller 116, col. 4, lines 10-14) are running the communication link management application (fig. 1, col. 3, lines 4-10) and stored in memory]**.

9. With regard to claim 26, Miriyala discloses, in a data communication network, apparatus for forwarding data across the network comprising:

means for assigning a priority level to the data, *wherein said priority level is based on a delay tolerance of said data and data supporting real time communication has a high priority level* **[if a high priority call comes in and there is sufficient bandwidth available, a customary (non-compressed) connection is made, col. 4, lines 10-15; otherwise, the bandwidth renegotiation scheme causes existing voice calls to adopt new compression schemes to accommodate the new high priority call, col. 5, lines 18-26**];

means for selecting the data for data compression responsive to the priority level **[priority levels are made between data and voice, col. 1, lines 14-15, and, furthermore,**

priorities are made between calls (i.e., regular calls and high priority calls), col. 2, lines 40-45 (i.e., more than two priority levels are available, col. 4, lines 44-46); high compression schemes use less bandwidth than low compression schemes, col. 5, lines 15-18, and, therefore, the bandwidth renegotiation scheme causes existing voice calls to adopt new compression schemes to support the new high priority call, col. 5, lines 18-26]; and

means for sending the data through the network **[the renegotiation scheme allows the new call to be accommodated within the network (col. 4, lines 19-22) prior to transmission, wherein compression is usually accomplished by a DSP, col. 1, line 65 to col. 2, line 2]**;.

10. With regard to claim 27, Miriyala discloses, in a packet switched network, apparatus for forwarding packets across the network comprising:

means for compressing data using a variable compression level **[priority levels are made between data and voice, col. 1, lines 14-15, and, furthermore, priorities are made between calls (i.e., regular calls and high priority calls), col. 2, lines 40-45 (i.e., more than two priority levels are available, col. 4, lines 44-46); high compression schemes use less bandwidth than low compression schemes, col. 5, lines 15-18, and, therefore, the bandwidth renegotiation scheme causes existing voice calls to adopt new compression schemes to support the new high priority call, col. 5, lines 18-26]**;

means for inputting the packets to the compressing means while adjusting the variable compression level for individual ones of the packets responsive to priority level of the packets, *wherein said priority level is based on a delay tolerance of said data and data supporting real time communication has a high priority level* **[if a high priority call comes in and there is**

sufficient bandwidth available, a customary (non-compressed) connection is made, col. 4, lines 10-15; otherwise, the bandwidth renegotiation scheme causes existing voice calls to adopt new compression schemes to accommodate the new high priority call, col. 5, lines 18-26]; and

means for sending the packets as compressed through the network **[the renegotiation scheme allows the new call to be accommodated within the network (col. 4, lines 19-22) prior to transmission, wherein compression is usually accomplished by a DSP, col. 1, line 65 to col. 2, line 2]**.

11. With regard to claim 2, Miriyala discloses compressing the data only if the priority level is below a threshold **[regular calls are compressed in order to meet threshold bandwidth requirements and to allow the node to accommodate the high priority call, col. 4, lines 19-22]**.

12. With regard to claim 3, Miriyala discloses

compressing the data according to the priority level prior to sending the data through the network **[the renegotiation scheme allows the new call to be accommodated within the network (col. 4, lines 19-22) prior to transmission, wherein compression usually accomplished by a DSP, col. 1, line 65 to col. 2, line 2]**.

With regard to claims 4, 6, 12, 19, and 21, Miriyala discloses

determining the compression level according to an inverse relationship between the compression level and the priority level so that high priority traffic is favored in allocating bandwidth **[if a high priority call comes in and there is sufficient bandwidth available, a customary (non-compressed) connection is made, col. 4, lines 10-15; otherwise, the bandwidth renegotiation scheme causes existing voice calls to adopt new compression schemes to accommodate the new high priority call, col. 5, lines 18-26]**.

13. With regard to claims 5, 18, and 20, Miriyala discloses

determining a compression level for the data based on the priority level **[priority levels are made between data and voice, col. 1, lines 14-15, and, furthermore, priorities are made between calls (i.e., regular calls and high priority calls), col. 2, lines 40-45 (i.e., more than two priority levels are available, col. 4, lines 44-46); high compression schemes use less bandwidth than low compression schemes, col. 5, lines 15-18, and, therefore, the bandwidth renegotiation scheme causes existing voice calls to adopt new compression schemes to support the new high priority call, col. 5, lines 18-26]** and network congestion **[depending on network congestion (col. 3, lines 54-55), a check is made to determine existing network utilization, col. 4, lines 7-9]**; and

compressing said data according to said priority level prior to sending said data through said network **[the renegotiation scheme allows the new call to be accommodated within the network (col. 4, lines 19-22) prior to transmission, wherein compression usually accomplished by a DSP, col. 1, line 65 to col. 2, line 2]**.

14. With regard to claims 7, 13, 16, and 22, Miriyala discloses

setting a threshold priority level for compression eligibility based on network congestion **[priority levels are made between data and voice, col. 1, lines 14-15, and, furthermore, priorities are made between calls (i.e., regular calls and high priority calls), col. 2, lines 40-45 (i.e., more than two priority levels are available, col. 4, lines 44-46); high compression schemes use less bandwidth than low compression schemes, col. 5, lines 15-18, and, therefore, the bandwidth renegotiation scheme causes existing voice calls to adopt new compression schemes to support the new high priority call, col. 5, lines 18-26]**; and

compressing the data only if the priority level is below the threshold **[regular calls are compressed in order to meet threshold bandwidth requirements and to allow the node to accommodate the high priority call, col. 4, lines 19-22]**.

15. With regard to claims 8, 15, and 24, Miriyala discloses that the priority level corresponds to a quality of service class **[it is inherent within an ATM system, described in Miriyala (col. 3, lines 10-13), that quality of service classes correspond to priority levels. For example, as described for claims 1, 11, and 16 above, respectively, priority levels between data transfer (non-delay sensitive) and voice transfer (delay sensitive) are necessarily different. Moreover, even among voice calls, high priority calls have priority over regular calls wherein regular calls are subject to be compressed for bandwidth utilization/accommodation]**.

16. With regard to claims 9, 14, and 23, Miriyala discloses that the data comprises a packet **[ATM packets using ATM protocol, col. 1, lines 24-27]**.

17. With regard to claim 28, Miriyala discloses that the data compression comprises at least three different levels of compression corresponding to three different priority levels **[Miriyala discloses several compression schemes which are negotiated dynamically (col.. 5, lines 40-41), depending on the priority level (i.e., one of several particular call compressions, default compression, etc., col. 4, lines 50-55) in order to free up bandwidth for new calls as well as for a high priority call, col. 5, lines 18-26]**.

18. With regard to claim 29, Miriyala discloses that data having a low priority level assigned thereto has a higher compression level **[priority levels are made between data and voice, col. 1, lines 14-15, and, furthermore, priorities are made between calls (i.e., regular calls and high priority calls), col. 2, lines 40-45 (i.e., more than two priority levels are available, col. 4, lines 44-46); high compression schemes use less bandwidth than low compression schemes, col. 5, lines 15-18, and, therefore, the bandwidth renegotiation scheme causes existing voice calls to adopt new compression schemes to support the new high priority call, col. 5, lines 18-26]** and a longer processing delay than data having a higher priority assigned thereto **[higher compression ratios require more processing delay over lower (or no) compression ratios, col. 2, lines 18-22]**.

Response to Arguments

19. Applicant's arguments with respect to claims 1-29 have been considered but are moot in view of the new grounds of rejection.

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

(a) Ahroni et al. (USP 6,014,694), System for adaptive video/audio transport over a network. This reference discloses audio/video streaming data as high priority with at least 3 levels of compression (Key, P and B frames) wherein the compression levels are determined by the priority levels and, therefore, discloses, teaches, and/or suggests the subject matter in Applicant's claims 1-29.

(b) Shaffer et al. (6,377,573), Method and Apparatus for providing a minimum acceptable quality of service for a voice conversation over a data network. This reference discloses at transporting voice packets over a network with at least 2 compression levels an at least 2 quality of service requirements.

(c) Sharma et al. (USP 5,546,395), Dynamic selection of compression rate for a voice compression algorithm in a voice over data modem. This reference discloses voice and data packets, with voice having priority, with at least 3 levels of compression wherein the compression levels are determined by the priority levels and, thus, discloses, teaches, and/or suggests the subject matter in Applicant's claims 1-29.

(d) Arimilli (USP 6,275, 502), Advanced statistical multiplexer. This reference discloses a statistical multiplexer which handles voice and data packets, with voice having priority, with at least 3 levels of compression wherein the compression levels are determined by at least 3 priority levels and, thus, discloses, teaches, and/or suggests the subject matter in Applicant's claims 1-29.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark A. Mais whose telephone number is (571) 272-3138. The examiner can normally be reached on 6:00-4:30.

22. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

23. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

February 17, 2006

DANG TON
PRIMARY EXAMINER